

REMARKS

Claims 1-3, 5-13, 15-22 are pending in the above-referenced patent application.

Applicant wishes to thank the Examiner for detailing allowed Claims 15-20, and allowable Claims 8-11 if written in independent form including all of the limitations of the base claim and any intervening claims. Claim 8 has been rewritten in independent form, including all of the limitations of the base claim and any intervening claims. As such, Claims 8-11 should be allowed.

Claim 21 was rejected under 35 USC 112, second paragraph, as being indefinite because the limitation of "... electric current to the coils generates a magnetic flux path ..." was deemed indefinite, and the patent office contends that magnetic circuitry forms a magnetic flux path, not by a current. Furthermore, the Patent Office contends, such limitation is not clearly supported in the specification. Claim 21 has been amended to further clarify that the magnetic flux path (a static field) passes through a magnetic circuit, of which the annular opening and the annular gap are a part, and is provided by the two magnet structures. Such a limitation is fully supported by the specification and drawings, e.g., on page 6, lines 4-7; and page 10, line 21 to page 11, line 12.

As such, a patentable distinction between the claimed invention and Fincham is that in the claimed assembly herein both of the magnets affect the flux density in both the annular opening and the annular gap, as opposed to the first magnet affecting the annular opening and the second magnet affecting the annular gap. This is because unlike Fincham, there is no separation that would change the flux density in the magnetic gap and the magnetic opening. Indeed, Fincham specifies that the first magnetic flux path is separate from the second magnetic flux path

(see col. 7, lines 8-17). By contrast, as required by Claim 21, the magnetic flux path is a continuous one that passes through the annular opening and the annular gap. As such, it is respectfully submitted that Claim 21 should be allowed.

Claims 1-3, 7 and 22 were rejected under 35 U.S.C. 102(b) as being anticipated by Fincham, USPN 5,548,657 (hereinafter “Fincham”). Claims 5-6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fincham in view of Paddock, USPN 5,604,815 (hereinafter “Paddock”). Claims 12-13 were rejected under 35 U.S.C. 103(a) over Fincham in view of Kosatos et al., USPN 5,894,524 (hereinafter “Kosatos”). The rejections are respectfully traversed because the claims include limitations not taught or suggested by the references, alone or in combinations.

Rejection of Claims 1-3, 7 and 22 under 35 USC 102(b) as being anticipated by Fincham is respectfully traversed because Fincham does not disclose all of the limitations of the claims.

As per Claim 1, Fincham does not teach or suggest a high frequency transducer comprising a first diaphragm having a first coil thereon, and “a second diaphragm having a second coil thereon formed on a periphery of said first diaphragm” (Claim 1). The Patent Office states that such a feature is shown in the single figure in Fincham, however the Patent Office does not specifically point out exactly where such feature is shown and described in Fincham. By contrast, in Fincham, the second coil 24 is not shown is described to around a periphery of the first diaphragm 34. If the Patent Office disagrees, Applicant respectfully request that the Patent Office point to such specific disclosure in Fincham so that the Applicant can respond.

Further, it is respectfully submitted that Fincham does not teach or suggest a first seat having a first magnet structure, “said first seat defining an annular opening to allow said second coil to be moveably suspended therein” (Claim 1). By contrast, Fincham discloses: “... a member 45 which forms a backplate 19 and an inner pole 20.” (Col. 3, lines 53-57). As such, element 19-20 in Fincham is not a seat as required by Claim 1. Further, element 19-20 does not define an annular opening of any sort. And, element 19-20 does not provide an annular opening to allow said second coil to be moveably suspended therein. The Patent Office has not referred to specific teachings in Fincham.

It is respectfully submitted that Fincham does not teach or suggest a second seat having a second magnet structure, “said second seat and said second magnet defining an annular gap to allow said first coil to be moveably suspended therein” (Claim 1). By contrast, the magnetic structure 28 in Fincham does not define an annular gap in relation to a second magnet for the first coil to be moveably suspended therein. The Patent Office has not referred to specific teachings in Fincham that show all of the above limitations of Claim 1. Therefore, it is respectfully suggested that rejection of Claim 1, and all claims dependent therefrom, should be withdrawn.

As per Claims 2-3, 7 and 22, Fincham does not disclose that “the first and second magnets are substantially disk shaped” (Claim 2) and that “the first and second magnets are substantially flat” (Claim 3). By contrast Fincham states:

“The magnetic structure 16 comprises a magnet ring 17, which may for example be formed of barium ferrite, a front annular plate 18 which forms an outer pole

and a member 45 which forms a backplate 19 and an inner pole 20. The plate 18, magnet ring 17 and member 45 are held together to provide a magnetic path interrupted by a non-magnetic air gap between the 18 formed by plate and the inner pole 20." (Col. 3, lines 53-57).

As such, in Fincham, an annular magnet shape is used. Further, Fincham does not disclose that "said first and second magnets are neodymium iron boron magnets" (Claim 7). Indeed, as the above passage illustrates, Fincham uses barium ferrite, not neodymium iron boron for both first and second magnets as required by Claim 7.

Fincham does not teach a "first seat including said first magnetic structure, and the second seat including said second magnetic structure, form an essentially non-separable, single magnetic assembly", as required by Claim 22. In Fincham the units are separable, stating: "...the high frequency unit is manufactured separately..." (col. 3, lines 23-28).

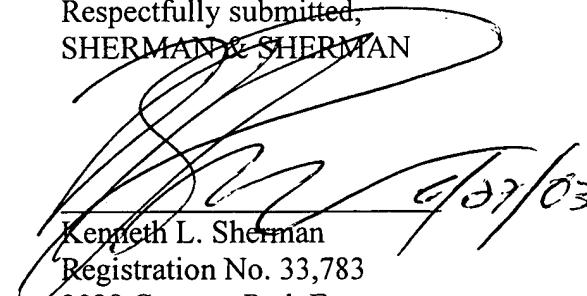
The Patent Office has not referred to specific teachings in Fincham that show all of the above limitations of each of the Claims 2-3, 7 and 22. Therefore, it is respectfully suggested that rejection of Claims 2-3, 7, 22 and all claims dependent therefrom, should be withdrawn.

Please charge any additional fees or credit any overpayment to our Deposit Account No. 19-1960. A duplicate copy of this letter is enclosed for that purpose.

CONCLUSION

Examination and allowance of all the claims is respectfully requested. If it is believed that a telephone interview will help further the prosecution of this case, Applicants respectfully request that the undersigned attorney be contacted at listed telephone number.

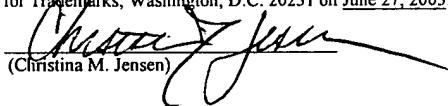
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CERTIFICATE OF MAILING

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(Christina M. Jensen)

Marked-Up Version of the Amended Claims

8. (Amended) [The invention of Claim 2, wherein] A high frequency transducer,
comprising:

a first diaphragm having a first coil thereon;

a second diaphragm having a second coil thereon formed on a periphery of said first
diaphragm;

a first seat having a first magnet structure, said first seat defining an annular opening to
allow said second coil to be moveably suspended therein; and

a second seat having a second magnet structure, said second seat and said second magnet
defining an annular gap to allow said first coil to be moveably suspended therein, wherein said
first and second magnets are substantially disk shaped, such that said second seat is positioned on
said first seat to enclose said first magnet therein but does not occlude said annular opening.

21. (Amended) The invention of Claim 1, wherein [application of electric current to
the coils generates] a magnetic flux path [that is continuous through] generated by the first
magnet and by the second magnet, affects the flux density in both the annular gap and the
annular opening.